Contaminated Sediments Action Plan

U.S. Environmental Protection Agency
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INTRODUCTION

Management of contaminated sediments presents a multifaceted challenge to the U.S. Environmental Protection Agency (EPA). EPA's 1997 *National Sediment Quality Survey* reported more than 2,500 state fish consumption advisories in water bodies throughout the U.S. Many of these advisories are caused by contaminants found in sediments. The *National Sediment Quality Survey* identified ninety-six watersheds as "areas of probable concern". In addition, as many as 20% of the nation's Superfund sites may include contaminated sediments. EPA programs with authority to address sediment contamination operate under many statutes, including the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA), the Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA) as amended by the Oil Pollution Act (OPA), and the Toxic Substances Control Act (TSCA).

In 1998, EPA prepared the *Contaminated Sediment Management Strategy* to streamline decision-making among these many programs and to help coordinate efforts to prevent sediment contamination from operating facilities using a range of voluntary, regulatory, and compliance/enforcement tools such as NPDES and RCRA permits, FIFRA and TSCA registration, and water quality standards (TMDLs). Prevention continues to be the most cost effective approach to addressing the contaminated sediment problem nationally.

The full spectrum of EPA's contaminated sediments activities, from remediation of contaminated sediment sites to the prevention of sediment contamination, benefits from coordination into a cohesive strategy and action plan. In addition, EPA has carefully reviewed conclusions and recommendations in the National Academy of Sciences' (NAS) 2001 report *A Risk-Management Strategy for PCB-Contaminated Sediments*.

The purpose of this Contaminated Sediments Action Plan is to report on our current activities and accomplishments, and to serve as a tool for EPA senior managers to closely coordinate our cross-program activities in the future.

ELEMENTS OF THE CONTAMINATED SEDIMENTS ACTION PLAN

1. Continue Obtaining Stakeholder Input

EPA will continue to solicit input from stakeholders on science and policy issues affecting management of contaminated sediments. In May 2001, EPA sponsored a contaminated sediments stakeholder forum. (The presentations made at this meeting are available on the Superfund Web page, www.epa.gov/superfund/new/sedpresent.htm.) In January 2002, EPA cosponsored a technical workshop on sediment stability. (The presentations at this meeting are available on the web page of the South/Southwest Hazardous Substance Research Center, www.hsrc.org/hsrc/html/ssw/sedstab/sedstab.html.) EPA plans to hold additional stakeholder meetings in FY2002 to discuss Agency efforts on contaminated sediments and to address key technical issues. Contact: Steve Ells, Office of Emergency and Remedial Response (OERR).

- In FY02-03, EPA's Office of Emergency and Remedial Response (OERR) will cosponsor at least two additional technical conferences with interested stakeholders. The first one will address characterizing ecological risks from sediment contamination and from remedy implementation (spring, 2002) and the second will address the fate and transport of contaminants in sediment (winter, 2003).

2. Improve Community Involvement

EPA will continue its efforts to improve community involvement during the investigation and cleanup of contaminated sites. Contact: Suzanne Wells, OERR.

- EPA issued additional guidance in November 2001 for site teams to promote early and meaningful community involvement in the Superfund site decision-making process.

- EPA will sponsor a workshop in the fall of 2002 in order to identify methods to improve consideration of societal and cultural impacts of baseline contamination and remedial alternatives at contaminated sites.

- EPA will continue to ensure independent technical assistance through the Technical Assistance Grant (TAG) and the Technical Outreach Services for Communities programs. These programs are available to interested community groups to help them understand the risks and potential remedies being considered at contaminated sites. We will also explore ways our technical assistance programs can better address the diverse needs of communities at large area sites.

3. Implement Risk Management Principles

EPA released a set of 11 fundamental risk management principles for use at contaminated sediment sites on February 12, 2002. The OSWER directive *Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites* outlines a consistent risk-based approach to be used in addressing contaminated sediment sites that can be applied within the framework of EPA's existing statutory and regulatory requirements. The directive has been posted on the internet site, www.epa.gov/superfund/resources/principles/9285.6-08.pdf .The risk management principles reflect recommendations in the 2001 NAS report. Contact: Steve Ells, OERR.

4. Develop Contaminated Sediment Remediation Guidance

The Office of Solid Waste and Emergency Response (OSWER) is developing a Contaminated Sediment Remediation Guidance, in cooperation with other EPA offices and other Federal agencies, in order to help site managers to evaluate contaminated sediment remedies and to promote sound site-specific decisions. The guidance includes consideration of the short-term impacts of remedial options as well as their ability to provide long-term protectiveness. The draft guidance is scheduled for public review in summer 2002. A final guidance is scheduled for winter of 2002. Contact: Leah Evison, OERR.

5. Implement New Consultation Procedures

As part of the Risk Management Principles initiative described above, OSWER will institute a new EPA Headquarters consultation procedure for all CERCLA and federal-lead RCRA sites where a significant sediment cleanup is expected. **This consultation procedure will help improve national consistency in cleanup approaches and will ensure that the risk management principles are appropriately considered at contaminated sediment sites. Contact: Steve Ells, OERR.**

6. Complete National Sediment Quality Survey and Report to Congress

In accordance with section 503 of the Water Resources Development Act of 1992 (WRDA), EPA's Office of Water (OW), in consultation with NOAA and the Secretary of the Army, is conducting a comprehensive national survey of data regarding sediment quality in the U.S.

- OW has drafted the first update to the 1997 "Incidence and Severity of Sediment Contamination in Surface Waters in the United States", *National Sediment Quality Survey*, which presents the results of a screening-level assessment of the National Sediment Inventory data from 1990 to 1999. The *National Sediment Quality Survey* used data from states and other sources that have been compiled in the National Sediment Inventory Database. For this assessment, OW examined sediment chemistry data, tissue residue data, and sediment toxicity test results. The purpose of this assessment is to determine whether potential adverse effects

from sediment contamination either exist currently or existed over the past 10 years at distinct monitoring locations throughout the United States. An updated draft report on the incidence and severity of sediment contamination in the U.S. was released for public comment in late 2001 and is expected to be published as final in early summer 2002. Contact: Scott Ireland, OW. See www.epa.gov/waterscience/cs/surveyfs.html.

7. Develop Additional Monitoring Guidance

EPA is developing guidance to assist regional site managers in collecting additional post-remediation monitoring data to better evaluate the effectiveness of implemented remedies.

- **EPA's Office of Research and Development (ORD) is planning to hold a workgroup meeting or workshop in 2002 to address issues related to monitoring the remediation of contaminated sediments. The results of this work will be used to develop a series of new fact sheets on physical, chemical, and biological monitoring methods. Contacts: Randy Wentsel, ORD; Joan Fisk, OERR.**

- **OERR is collecting existing monitoring data in order to evaluate the effectiveness of various remedies in achieving remedial action objectives and cleanup goals. OERR is also identifying and funding new monitoring projects to obtain additional data. Contact: Leah Evison, OERR.**

- **OW has recently published a new technical manual that provides a compilation of methods for collecting sediment samples for chemical and toxicological analyses. This technical manual was published January 30, 2002. Contact: Richard Healy, OW. See www.epa.gov/water/waterscience/cs/collection.html.**

8. Contaminated Sediment Assessment Pilot

In spring, 2002, OSWER, OW, the Office of Enforcement and Compliance Assurance (OECA), and EPA's Regional Offices will initiate a pilot project to facilitate cross-program coordination on contaminated sediments. The pilot project will bring a cross-Agency focus to identifying and assessing waters that are impaired by sediment contamination. The pilot will utilize the legal authorities and techniques available to satisfy the needs of both remedial investigation/feasibility study (RI/FS) evaluations and Total Maximum Daily Load (TMDL) modeling. The ultimate goal of the pilots is to develop more watershed-based approaches to identifying, assessing, and addressing, as necessary, contaminated sediments. EPA will work with other Federal agencies, states and interested stakeholders as these pilots are identified and implemented. Contacts: Donald Brady/Myra Price, OW; Lee Hofmann, OSWER; Sharon Frey, OERR.

9. Contaminated Sediments Management Committee

EPA has formed a Contaminated Sediments Management Committee with senior officials of various Headquarters and Regional Offices to ensure full coordination of technical and policy issues across EPA. Contact: Larry Reed, OERR.
In addition to the Contaminated Sediments Management Committee, EPA will reestablish the Sediment Network under the leadership of Office of Water's Office of Science and Technology, Superfund, and ORD, to resolve issues and share technical information on contaminated sediments across EPA's programs and regions. Contacts: Richard Healy, OW; Patricia Erickson, ORD.

10. Contaminated Sediments Science Plan

EPA is developing a Contaminated Sediments Science Plan to coordinate Agency-wide science activities and research with respect to contaminated sediments. The Science Plan analyzes the current Agency activities on contaminated sediments and lays out a strategy for future science activities and research. **The research recommendations in the 2001 NAS report will be factored into the Science Plan.** The Contaminated Sediment Science Plan will be available for public comment and for Science Advisory Board review in the summer 2002. Contact: Lee Hofmann, OSWER.

Concurrent with the development of the Contaminated Sediments Science Plan, ORD has developed, along with EPA offices and Regions, a draft multi-year research plan for contaminated site assessment, characterization, and cleanup, including contaminated sediment sites. The multi-year plan addresses contaminated sediment r**esearch needs in areas of modeling, monitoring, human health and ecological risk, and risk management. Six focus groups, made up of Headquarters and Regional scientists, have been formed to collaborate on addressing the key scientific issues concerning contaminated sediments. The results of ORD contaminated sediment research activities will be improved tools for use by EPA, states, local regulators and other stakeholders. Contacts: Ben Blaney, ORD; Sharon Frey, OERR.**

NEXT STEPS

Implementation of this Action Plan is expected to continue over the course of FY 2002 and FY2003, with additional items potentially arising from the planned workshops, research projects, and coordination activities. It is expected that continuing discussions will be held both within and outside the Agency to ensure that EPA's contaminated sediments efforts will continue to identify and address areas of concern raised by stakeholders.

Action	Date
Multi-year plan issued to address contaminated sediment research needs.	November 2001
EPA issued additional guidance for site teams to promote early and meaningful community involvement in the Superfund site decision-making process.	November 2001
EPA released draft National Sediment Quality Survey and Report to Congress on the incidence and severity of sediment contamination in the U.S. for public comment.	December 2001
Researchers/multi-agency technical workshop on characterizing sediment stability and transport held.	January 22-24, 2002
OW published new technical manual for collecting sediments for chemical and toxicological analyses	January 30, 2002
EPA issued risk management principles for use at contaminated sediment sites.	February 12, 2002
EPA will convene a new NACEPT subcommittee to clarify the role of the NPL and analyze approach for cleaning up contaminated sediment and mining sites.	FY2002
ORD workshop planned to address issues related to monitoring the remediation of contaminated sediments.	FY2002
OERR technical workshop on characterizing ecological risks from sediment contamination and from remedy implementation planned.	Spring 2002
Contaminated Sediments Science Plan available for peer review.	Summer 2002
Draft Contaminated Sediment Remediation Guidance available for public review.	Summer 2002
Two public meetings planned to solicit public	Summer 2002

discussion and comments on the draft Sediment Remediation Guidance.	
EPA workshop planned to identify methods to improve consideration of societal and cultural impacts of baseline contamination and remedial alternatives at contaminated sites.	Fall 2002
Contaminated Sediment Assessment Pilot.	Fall 2002
Final Contaminated Sediment Remediation Guidance to be issued.	Winter 2002